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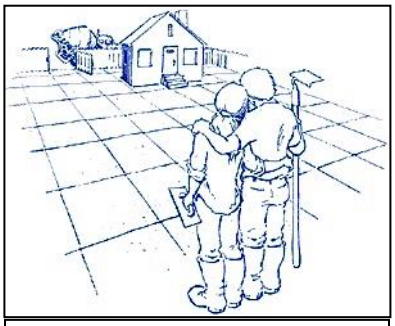
El Cajon Storm Water Protection Program

Polluted Urban Runoff – A Source of Concern

During the last few decades, the cities of the greater San Diego area have invested billions of dollars in new wastewater treatment facilities to help control water pollution. Despite this effort, many of our local streams, rivers, bays and beaches are still plagued with pollution and cannot be used for swimming, fishing or other desirable activities. Why? The answer lies in the ways we manage our land by allowing pollutants to become mixed with our urban runoff and storm water.

When rain falls in the El Cajon area, the runoff washes pollutants off our streets, parking lots, construction sites, industrial storage yards, and lawns. This urban runoff carries a mixture of pollutants from our cars and trucks, outdoor storage piles, muddy construction sites and pesticide spills. Efficient systems of ditches, gutters and storm drains carry the polluted runoff to nearby streams, rivers and eventually the ocean, bypassing wastewater treatment systems.



Urban Landscapes Result in Increased Runoff & Pollution

One way of cleaning up polluted urban runoff would be to install storm water treatment facilities. However, the cost of such facilities would be enormous. Another less expensive method is to keep pollutants out of any area subject to runoff or rainfall. The potential payoff from better land management practices is high, promising healthier waters, quality water recreation close to home and development possibilities in close proximity to natural watercourses. What we do on our land is reflected in our water.

Although we have far less urban area than rural area in our local watershed, urban areas have a higher percentage of surfaces where water cannot soak in (i.e., impervious surfaces). That means more water runs off instead of soaking in, and more of this urban runoff enters our streams, bays and the ocean unfiltered by soil or vegetation.

Some of the pollutants found in urban runoff are similar to pollutants found in rural runoff. These are the "conventional" pollutants — sediment, nutrients, oxygen-robbing materials, and bacteria. Unfortunately, urban areas on a per-acre basis deliver much more of these conventional pollutants than do adjacent rural areas.

Major Causes of Urban Runoff Pollution

What day-to-day activities cause urban runoff pollution? Here are some of the biggest causes:

- **Over-irrigation.** Over-irrigation results in the discharge of irrigation water to the storm drain system, carrying with it pet waste, fertilizers, pesticides and other pollutants. Over-irrigation is also an illegal discharge and should be reported.

- **Using automobiles.** Particles in auto exhaust contain toxic organics and heavy metals. Dripping motor oil and wear from brake linings and tires deposit pollutants on streets and highways.
- **Maintaining vehicles.** Vehicle maintenance results in drips and spills of oil, coolant and other fluids. When performed outdoors, these fluids soak into asphalt and concrete pavements until they are washed away with the next storm. Water from washing vehicles outdoors carries pollutants directly to the nearest storm drain.
- **Allowing drainage from the shop floor to flow outside.** Allowing process or clean-up water to drain out onto the street is an often-seen practice that transports pollutants to the storm drain.
- **Cleaning tools or equipment outdoors.** Cleaning or rinsing containers, tools, floor mats or other items outdoors discharges pollutants such as chemicals, detergents, oils, etc.
- **Dumping wastes.** People looking for a "shortcut" to dispose of used oil, paint or other wastes dump them directly into storm drain inlets, causing pollution.
- **Landscaping and grounds maintenance.** Overuse, or indiscriminate use, of fertilizers and pesticides results in these materials running off landscaped areas into storm drains.
- **Allowing dumpster areas to become untidy.** Liquids that leak from dumpsters or garbage left outside the dumpster get washed away during a storm.
- **Building or remodeling facilities.** Disturbing soil and vegetation during construction greatly increases erosion; sediment is a pollutant. During construction, proper material handling and waste disposal is especially important because much of the work is performed in areas subject to rainfall.

Effects of Urban Runoff Pollution

What are the consequences of these activities? The most immediate effects can easily be seen: many creeks have an oily sheen near storm drain outfalls, litter is left behind by receding waters after a storm, layers of oil- and grease-laden sediments accumulate, and dead animals are occasionally found along streams and at beaches.

But the most serious effects are much more subtle. Some toxic substances affect critical life stages of certain organisms. Even if we do not usually see, or think about, these organisms (such as algae, amphibians or fish) they are part of the food supply for other plants and animals, including mammal and birds. Pollutants in the aquatic environment disrupt the food chain. Many toxins accumulate in organisms, including people, further up the food chain. This is why the State Health Department recommends restrictions on human consumption of some species of fish and birds found in the San Diego area. Other effects of urban runoff pollution include contamination of water supply sources and loss of recreational activities such as fishing and swimming.

People can still stop storm water pollution because people cause it. By making small changes in the ways we live and work, we can reduce the pollution we produce.